

Serial Number:

10/059,487

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R E M A R K S

The Examiner had rejected claims 1, 5 and 6 under Section 102 as being anticipated by Stephens 6,636,538 or, in the alternative, as obvious over Lorenzen 6,535,533 previously cited and discussed.

The Examiner had been of the view that Stephens discloses in Fig. 1 an arrangement having a laser diode bar (14), a heat sink (12) and a substrate (16) in which the laser bar is mounted on a surface of the heat sink and the substrate is mounted on (another) surface of the heat sink which is adjacent to the surface on which the laser diode bar is mounted. The Examiner's analysis of the Stephens patent disclosure is substantially correct.

However, Stephens' substrate (16) is not mounted directly adjacent to the heat sink's surface on which the laser diode bar is mounted so as to be able to locally modify the CTE of the heat sink in the area where the laser diode bar is mounted thereby to alleviate thermal stress between the laser diode bar and the heat sink which have very different CTEs. Stephens clearly states (Abstract and Col. 4, lines 29-40) that the purpose of substrate (16) is to permit each individual laser diode package to have its own electrical isolation so that several packages can be easily attached together, (as in Fig. 3). Nowhere does Stephens suggest using substrate (16) for the purpose of locally modifying the heat sink's CTE.

Moreover, reference to any of Stephens' figures shows that substrate (16) is not in fact mounted directly adjacent that surface of the heat sink on which the laser diode bar is mounted. Stephens mounts substrate (16) so that it is not adjacent to the edge of the laser diode bar but is spaced away from the edge of the laser diode bar and is therefore not in a position to locally modify the CTE of the heat sink near its laser diode bar mounting surface. Accordingly, Stephens does not anticipate applicants' use of a substrate having a lower CTE than that of the heat sink to alleviate thermal stress between the laser diode bar and the heat sink.

The differences are believed to be clearly pointed out in claim 1 as amended. Allowance of claim 1 and dependent claim 5 are therefore requested.